ROOMAN

INNOVATE INTEGRATE EMPOWER

JOB GUARANTEED TRAINING

Networking & Cybersecurity

100% Job Guaranteed Program

Average Salary
5 LPA

Training Mode
Offline

Kick start your Career with Rooman

- Industry Relevant Course Curriculum
- Learn from Industry Experts
- 500+ Hiring Companies
- 100% Placement Assistance

Learn with Industry Experts & Get your dream Job

About
Rooman Technologies

Rooman Technologies is India's leading training company with 23+ years of expertise in training delivery across government, private and corporate sectors. With a library of 100+ courses, we've trained more than a million students across the country since inception. We are a key National Skill Development Corporation (NSDC) partner and one of the largest training partners successfully implementing PMKVY, DDUGKY programs across India and other skilling initiatives like the UDAAN project. World class infrastructure and work facilities ensure the right environment for people to perform, engage customers and achieve business excellence. Rooman has over 1500 employees across its 100 plus branches in India.

23+
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10+
LAKH
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100+
Courses
Offered

100+
BRANCHES
World Wide

800+
TRAINERS
& Industry Experts

1500+
MOUs
for Placements

About Course

The Networking and Cybersecurity learning pathway provides a strong foundation on the fundamentals of Networking and Cybersecurity concepts, how to protect against them, and how cybercriminals can use their target's digital footprints to find exploits. Given the vastness & dynamic nature of the cyber world, day-by-day cyber crimes are growing. Cybersecurity is the field where it is constantly evolving with numerous opportunities at various levels. There is an ever growing demand for exciting, well-paying jobs in today's Networking and Cybersecurity industry.

This professional course will give you the technical skills to become job-ready for a Cybersecurity Analyst role. Instructional content and labs will introduce you to concepts including network implementation, security, endpoint protection, incident response, threat intelligence, penetration testing, and vulnerability assessment.

Augment the Networking knowledge with In-demand Cybersecurity skills

Course Curriculum

CCNA

Introduction to Networking

- Introduction to Networking
- Network Topologies
- Networking Devices

OSI Reference model

- The OSI Reference Model Overview
- The TCP/IP Stack
- Data encapsulation

Working with Ethernet

- Fundamentals of Ethernet
- Ethernet Frame Format
- Hub vs Switch
- ARP and MAC address table
- Cabling Types (Co-axial, Twisted Pair, Optical Fibre)
- Cable Issues (collisions, errors, duplex, speed)
- Connectors
- PoE Concept

Introduction to Cisco IOS

- Navigating the Cisco IOS Operating System
- Cisco IOS Configuration Management
- Cisco Networking LAB

Understanding TCP & UDP

- Transport Layer Header Format
- TCP and UDP
- Port Numbers
- The Network Layer
- The IP Header Format
- Unicast, Multicast and Broadcast Traffic

Introduction to IP addressing & subnetting

- Number System
- Binary representation of IP
- IPv4 Addresses Classes
- IPv4 Subnetting
- VLSM Calculation

Working with layer 2 Switches

- Switch Configuration
- Speed and Duplex Settings
- CDP and LLDP
- Port security
- Basic Layer 1 and 2 Troubleshooting

Managing Cisco Devices

- Cisco Device Management
- The Boot Up Process
- Factory Reset and Password Recovery
- Backing up the System Image and Configuration
- Upgrading IOS

Understanding & configuring routing protocols

- Routing Fundamentals
- Dynamic Routing Protocols vs Static Routes
- Static Routes
- Default Routes
- Summarisation
- Longest Prefix Match
- Routing Protocol Types
- Routing Protocol Metrics
- Equal Cost Multi Path
- Administrative Distance
- Loopback Interfaces
- RIP Routing

EIGRP Routing

- EIGRP operations
- DUAL Algorithm features
- Configuring & implementing EIGRP (IPv4)
- Configuring & implementing EIGRP (IPv6)
- EIGRP Authentication
- Configuring Load balancing in EIGRP

OSPF Routing

- Introducing link state routing protocol
- OSPF protocol and Operations
- OSPF terminology and Packet Type
- Discussing OSPF Protocol States
- DR and BDR Election process
- Configuring OSPF with single area. Configure and verify OSPF
- Neighbour adjacencies
- OSPF states
- Router LSA types

Configuring DHCP on Cisco Devices

- DHCP Dynamic Configuration Protocol
- Cisco DHCP Server
- DHCP relay
- Windows, Mac and Linux client IP settings
- Cisco DHCP Client
- DHCP snooping
- Connectivity Troubleshooting
- Cisco Troubleshooting Methodology

Working with VLAN

- Campus LAN Design - Core, Distribution and Access Layers
- Spine-Leaf Network Design
- 802.1Q and Native VLAN
- VLAN Access and Trunk Ports
- DTP Dynamic Trunking Protocol
- VTP VLAN Trunking Protocol
- Inter-VLAN Routing

First Hop Redundancy Protocols

- Network Redundancy
- FHRP First Hop Redundancy Protocols
- HSRP Hot Standby Router Protocol
- HSRP Advanced Topics

Spanning Tree Protocols

- Spanning Tree Protocol
- Spanning Tree working and port states
- Rapid PVST+
- Manipulating the Root Bridge Election
- Spanning Tree and HSRP Alignment
- PortFast, BPDU Guard and Root Guard
- STP Troubleshooting

Network bonding

- EtherChannel (LACP, PAgP)
- EtherChannel Load Balancing
- EtherChannel Protocols and Configuration
- Layer 3 EtherChannel

Protocol overview

- Overview of Protocols
- DHCP, DNS, HTTP, Telnet, SSH, NTP, HTTPS, SNMP, ICMP, POP3, IMAP, SMTP, TFTP, FTP

Configuring ACL

- ACL Overview
- Configuring Standard, Extended and Named ACLs

Network Address Translation

- IPv4 Address Exhaustion and NAT
- Static NAT
- Dynamic NAT
- PAT Port Address Translation

Introduction to IPv6

- The IPv6 Address Format
- IPv6 Global Unicast Addresses
- EUI-64 Addresses
- Unique Local and Link Local Addresses
- Anycast and Multicast
- SLAAC Stateless Address Autoconfiguration
- IPv6 Static Routes

Wide Area Networks

- WAN Overview
- VPN - Virtual Private Networks
- Metro Ethernet
- MPLS Multi-Protocol Label Switching
- PPPoE Point to Point Protocol over Ethernet
- WAN Topology Options

Security Fundamentals

- The Security Threat Landscape
- Common Attacks
- Firewalls and IDS/IPS
- Firewalls vs Packet Filters

- Cryptography
- TLS Transport Layer Security
- Site-to-Site VPN Virtual Private Networks
- Remote Access VPN Virtual Private Networks
- Threat Defence Solutions
- Line Level Security
- Privileged Exec and Password Encryption
- Usernames and Privilege Levels
- SSH Secure Shell
- AAA Authentication, Authorization and Accounting
- Global Security Best Practices

Monitoring & Traffic Shaping

- Syslog
- Terminal Monitor and Logging Synchronous
- SNMP Simple Network Management Protocol
- QoS Overview
- Classification and Marking
- Congestion Management
- Policing and Shaping

IT Services

- Traditional IT Deployment Models
- Defining Cloud Computing
- Cloud Computing Case Study
- Server Virtualization
- Virtualizing Network Devices
- Cloud Service Models
- Cloud Deployment Models
- Cloud Computing Advantages

Wireless Networks

- Wireless Network Types
- Infrastructure Mode and Wireless Access Points
- Wireless LAN Controllers and CAPWAP
- Switch Configuration for Wireless Networks
- Wireless Channels and Radio Frequencies
- Wireless Security (WPA, WPA2 and WPA3)

Network Automation

- The Benefits of Network Automation and Programmability
- Python, Git, GitHub and CI-CD
- Data Serialization Formats: XML, JSON and YAML
- APIs - CRUD, REST and SOAP
- Configuration Management Tools - Ansible, Puppet and Chef
- SDN Software Defined Networking
- Ansible LAB

Cybersecurity

- Introduction to Cybersecurity
- Challenges of protecting electronic information
- Using the Lab simulator

Access Control and Identity management

- Introduction to Identity management
- Controlling access to system resources
- Access control models, terminology, best practices, tools
- Remote and network considerations to controlling access.

Cryptography

Introduction to cryptography

Cryptographic attacks and the tools to ensure data integrity

Hashing, symmetric and asymmetric encryption, and certificates

Methods of implementing cryptography

Policies, Procedures, and Awareness

- Security policies, procedures and security awareness
- Security classification levels, documents
- Business continuity plans, risk management considerations, incident response
- Trusted computing, software development concerns, and management of employees.

Physical Security

- Fundamentals of physically securing access to facilities and computer systems
- Protecting a computer system with proper environmental conditions and fire-suppression
- systems
- Securing mobile devices and telephony transmissions.

Perimeter Defences

- Perimeter defences to increase network security
- Perimeter attacks, security zones and devices
- Configuring a DMZ, firewalls, NAT router, VPNs, protections against web threats
- Network Access Protection (NAP) and security for wireless networks.

Network Defences

- Introduction to Network Defences
- Network device vulnerabilities and defences
- Providing security for a router and switch
- Implementing intrusion monitoring and prevention.

Host defences

- Introduction Host Defences
- Types of malware and how to protect against them
- Protecting against password attacks recommendations for hardening a Windows system
- Configuring GPOs to enforce security, managing file system security
- Procedures to increase network security of a Linux system.

Application defences

- Introduction to Application Defences
- Basic concepts of securing web applications from attacks
- Fortifying the internet browser, securing e-mail from e-mail attacks
- Concerns about networking software,& security considerations when using a virtual machine.

Data defences

- Introduction to Data Defences
- Elements of securing data, such as, implementing redundancy through RAID
- Proper management of backups and restores, file encryption
- Implementing secure protocols, and cloud computing.

Ethical Hacking

- Hacking concept, what is hacking?
- Terms we use in hacking.
- Need of Ethical hacking.
- Cases of Hacking in India & across the globe
- Types of Hacking
- Building the foundation for Ethical hacking
- Hacking Phases
- Types of Hackers
- Roles and Responsibilities
- Advantages & scope for hacking
- Drawbacks & Limitation of hacking
- Threats & categories
- Attack Vectors and Exploitation
- Common Hacking Tools
- Hacking Techniques & Approaches

Policies and Controls

- Risk Management & Incident Management
- Information Security controls
- Data Management
- Concept of Penetration testing
- Types of Penetration testing
- Phases of Penetration testing
- Vulnerability Assessment by Penetration testing

Viruses, Trojans, Malwares, & OS Level Attacks & Counter Measures

- Introduction to Malware
- Different Ways a Malware can Get into a System
- Common Techniques Attackers Use to Distribute Malware on the Web
- Components of Malware
- Introduction to Viruses, Worms & Trojan
- Types of Virus, Worms &Trojan
- Fake Antiviruses
- How Did Antivirus Works
- Introduction to Malware Analysis
- Malware Analysis Procedure
- Malware Detection Method

Foot printing, Enumeration, Scanning, Sniffing, Social Engineering

- Information Gathering Using Google Advanced Search and Image Search
- VoIP and VPN Footprinting through Google Hacking Database
- Finding Company's Top-level Domains (TLDs) andSub-domains
- Finding Location, People search, Professional search
- Techniques for Enumeration, Services and Ports toEnumerate
- NetBIOS, SNMP, LDAP Enumeration
- Information Gathering Using Groups, Forums, and Blogs
- Network Scanning Concepts
- Scanning Tools and Techniques
- Scanning Pen Testing
- Port Scanning & Countermeasaures
- Sniffing Concepts & Techniques
- WireShark installing & concept
- Sniffing Detection Techniques
- Social Engineering Concepts
- Social Engineering Techniques
- Insider Threat / Insider Attack

SQL Injection, DOS Attacks, Session hijacking and System hacking

- Basics to the SQL queries
- How Injection Can be done
- Cross Site ScrIPting Attacks
- DoS/DDoS Attack Techniques
- DDoS Case Study
- DoS/DDoS Attack Tools
- Session Hijacking Concepts
- Network Level Session Hijacking
- System Hacking Concepts
- Cracking Passwords
- Escalating Privileges
- Hiding Files and Covering tracks
- Client side Hijacking

Web Applications, Servers attacking & Counter measures

- Basics of Web Application and Technology stack.
- OWASP Top 10 Application Security Risks – 2017
- Injection Flaws
- File Injection Attack
- Broken Authentication
- Sensitive Data Exposure
- XML External Entity (XXE)
- Broken Access Control
- Security Misconfiguration
- Cross-Site ScrIPting (XSS) Attacks
- Insecure Deserialization
- Using Components with Known Vulnerabilities
- Web App Hacking Methodology and its foot printing

- Password Attacks
- Password Functionality Exploits
- Password Guessing and Brute-forcing
- Web Server Concepts
- Web server attacks
- Web Server Attack Methodology
- Web Server Attack Tools
- Detecting Web Server Hacking Attempts
- Patch Management
- Web Server Security Tools

IoT and Cloud Attacks and Defense Mechanisms

- Basic of IOT, Architecture, Technology andProtocols
- Challenges, Opportunity in IOT
- OWASP Top 10 IOT Vulnerabilities and Obstacles
- DDos Attack
- Jamming Attack
- Botnets
- Man In middle concept
- Data & Identity Theft
- Introduction to Cloud & Virtualization
- Cloud Deployment and responsibilities
- Service Hijacking
- Social Engineering
- Network sniff
- XSS attack
- DNS (Domain Name system attack)
- Control Layers and Responsibilities
- Cloud Computing Security Consideration

Mobile & Wireless Networks Hacking and Counter measures

- Introduction to the Mobile architecture
- Working princIPle for mobile OS
- Security of the application used in Mobiles
- Hacking Methodology for mobile with Metasploit
- Introduction to Terminology, Networks,Standards
- Types of Wireless Authentication and Encryption
- WEP (Wired Equivalent Privacy) Encryption
- WPA (Wi-Fi Protected Access)Encryption
- WPA2 (Wi-Fi Protected Access 2) Encryptio
- Wi-Fi Discovery
- GPS Mapping
- Traffic canalizing
- Launch Wireless attacks
- Crack Wi-Fi Encryption

Firewall, IDS & honeypot evasion techniques, tools, & countermeasures

- What is Firewall & Exampl
- What is IDS & example
- What is Honeypots & examples
- Case study of Bypassing Firewall ,IDS, Firewal
- What is Firewall & Examples
- What is IDS & example
- What is Honeypots & examples
- Case study of Bypassing Firewall ,IDS, Firewal
- Packet Fragmentation and Source Routing
- Working with SNORT [DetectionTool]
- IP address Decoy and Spoofing

- IP Spoofing Detection Techniques: Direct TTL Probes
- IP Spoofing Detection Techniques: IP Identification Number
- IP Spoofing Detection Techniques: TCP Flow Control Method
- IP Spoofing Countermeasures

Cryptology, Vulnerability Analysis, Logging and Audit

- Types of Cryptography
- Government Access to Keys (GAK)
- CIPhers
- Data Encryption Standard
- Advanced Encryption Standard
- RC4, RC5, and RC6 Algorithms
- Digital Signature, SSL, TLS
- Cryptography Toolkit & Disk Encryption
- Brute-Force Attack
- Meet-in-the-Middle Attack on Digital Signature Scheme
- Side Channel Attack
- Hash Collision Attack
- DUHK Attack
- Rainbow Table Attack
- Vulnerability Assessment Concept & Solutions
- Vulnerability Assessment Tools & Reports
- Comparing Security Audit, Vulnerability Assessment, and Penetration Testing

Capture the flag [CTF]

- Understanding of Kali Linux commands
- Using commands situation based
- Understanding of web application
- Web application tricks to get data
- Doing pentesting Situation based
- Installing and working on Kali Linux
- Vulnerability Assessment Concept & Solutions
- Vulnerability Assessment Tools & Reports

About
Placement Assistance

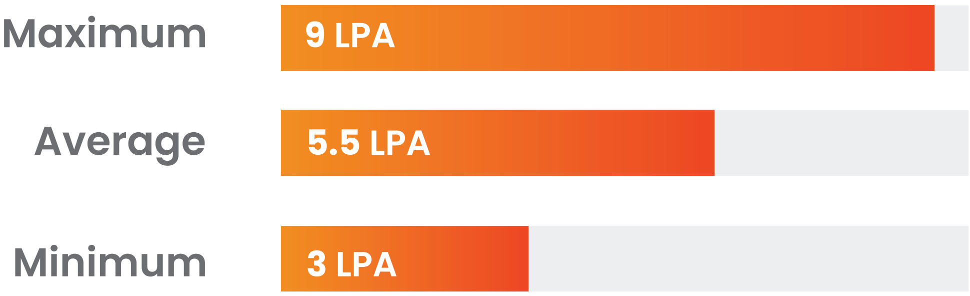
☑ All eligible candidates will receive placement assistance after program completion

☑ Access to Opportunities with Leading Companies

☑ Workshops on Resume Review & Interview Preparation

☑ Career Guidance & MentorshIP by Industry Experts from Rooman

Salary Scale



Job Roles
Offered

Cybersecurity Analyst

Information Security Analyst

Security Engineer

Network Engineer

Network Analysist

Information Security Specialist

- Network Security Engineer
- Network Security Architect
- Cybersecurity Consultant
- SOC Engineer
- TAC Engineer
- NOC Engineer

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